

Team Name: _____ Team Number: _____

Student Names: _____

CRIME BUSTERS

Cobra Invitational
Saturday, January 21st 2017

	Type of Analysis	Total Correct	Total Possible Points	%	Score
Part A	Qualitative Analysis		14	50	
Part B	Hairs, Fibers, Plastics & Metals		5	10	
Part C	Chromatography		9	5	
Part D	Fingerprints		1	10	
Part E	Analysis		21	25	
Total/Final Score					

Final Rank: _____

CASE DETAILS

On December 23rd, 2016, the last day of school before Christmas break, there was a party organized by the teachers for all middle school students. The students were asked to drop off party supplies, board games (a snow storm was expected), and desserts or appetizers in the school gym before the first bell. The teachers were going to bring in the main entrées.

At 11 am, 30 mins before the start of the party, classes around the gym paused when they heard a loud scream from the surrounding area. The scream came from Mrs. Paula Walker the middle school science teacher.

All the tables had been turned upside down. Chips were stomped on and crushed; Cookies and desserts were thrown on the walls and furniture. Board games were all mixed up and the party supplies were shredded or cut into designs and soaked in different liquids.

There was also a note left on the table which read as follows

I HATE PARTIES AT SCHOOL!

I think we could have started our break a day early if it wasn't for this stupid party.

I also heard the teachers talk about clean up after the party and that the cleaning supplies were stacked in the corner to make it easier to clean.

WE SHOULDN'T HAVE TO STAY AFTER SCHOOL TO CLEAN UP!

The Principal and other teachers huddled around the gym and decided that the school's Crime Busters team would be called in to investigate. After 4 hours, the Crime Busters team finally narrowed it down to 4 suspects.

Your mission is to review the case notes, identify all the collected evidence and determine who was involved in the destruction of the party.

CRIME SCENE NOTES & SUSPECT LIST

SUSPECT #1 : Marianna Major

- 8th Grade student with long hair
- Loves to party and hang out. Doesn't miss a chance to sleep in
- Can't understand why she has to attend school parties when there is really no classes and its not like they are in elementary
- She takes a class in Contemporary Fashion & Design and is spending a lot of time with embroidering different types of thread
- Hobbies: Crafts and baking
- Evidence found on her during the time of investigation
 - Item #1
 - Item #2 (Mixture)
 - Item #3
 - Item #4 - Wet paper towel stuffed in her pocket
 - Pen #1 was taken from her school bag
 - Fingerprint records were taken during the investigation



SUSPECT #2 : Jeffery Jammies

- 8th Grade Student with black hair
- Helps his dad in their construction business and makes extra pocket money. He always comes to school with messy clothes
- Loves Red Gatorade
- He is upset that school didn't end a day early
- Hobbies: Learning to use the construction tools so he can do better than his dad and taking long walks with his dog
- Evidence found on him during the time of investigation
 - Item #5
 - Item #6
 - Item #7
 - Item # 8 Wet patch on his bag
 - Pen #2 was taken from her school bag
 - Fingerprint records were taken during the investigation



SUSPECT #3: Susan Smarty

- 8th Grade Student with dyed blue hair
- Loves to eat chips and is disappointed that the party will not happen as planned
- Thankful to her mother for packing her a warm sandwich in foil
- She has been having a cold and taking some medication. She has been playing with the tablet enjoying its reaction in water.
- Hobbies: Loves to sing and dance
- Evidence found on her during the time of investigation
 - Item #9
 - Item #10 (Mixture)
 - Item #11
 - Item # 12
 - Pen #3 was taken from her school bag
 - Fingerprint records were taken during the investigation



SUSPECT #4: Penelope Periwinkle

- 8th Grade Student
- Like everyone else she wants to have the break start early but was also guilty that she forgot to bring a dish to share
- Always seen wearing pull on short black shorts
- She loves lemonade
- Hobbies: Enjoys her tree house and loves to read
- Evidence found on her during the time of investigation
 - Item #13
 - Item #14
 - Pen # 4 was taken from her school bag
 - Fingerprint records were taken during the investigation



EVIDENCE FOUND AT THE GYM

15 Finger Print from the crime scene



Item # 16

Item # 17

Item # 18 (Plastic) ~~with the following Recycle symbol~~



Item # 19

Item # 20

Chromatography of the ink from the note was performed in water by the Crime Busters Team (See Chromatography station for the ink results)

DATA ANALYSIS & IDENTIFICATION:

Identify all the items of evidence.

1 -	11 -
2 -	12 -
3 -	13 -
4 -	14 -
5 -	15 - Which suspect(s) finger print matches the one from crime scene?
6 -	16 What type of Hair is it? Human, Dog or Cat?
7 -	17 - What type of Fiber is it? Plant, Animal or Synthetic Name the fiber
8 -	18 -
9 -	19 - What type of Fiber is it? Plant, Animal or Synthetic Name the fiber Powder
10 -	20 - What is the pattern of the finger print at the crime scene?

**ATTACH THE RESULTS OF THE PAPER CHROMATOGRAPHY FOR EACH SUSPECT'S
PEN BELOW (All four papers must be attached for full credit)**

Which suspect's pen matches the one in the developed paper chromatography?

This image shows a full page of blank white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page, providing a template for writing or drawing. There are no margins, text, or other markings present.

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.